

**IN THE CLAIMS:**

1-19. (cancelled)

20. (currently amended) A method of potentiating an immune response against an antigen comprising one or more B-cell antigenic epitopes and/or one or more T-cell antigenic epitopes in an animal, said method comprising the step of administering to said animal said antigen and an effective amount of an adjuvant, wherein said adjuvant is a papaya mosaic virus (PapMV), or a virus-like particle (VLP) comprising PapMV coat protein ~~or genetically modified PapMV coat protein~~, said PapMV coat protein ~~or genetically modified PapMV coat protein~~ being capable of assembling to form said VLP,  
~~wherein said genetically modified coat protein comprises one or more amino acid deletions, insertions and/or substitutions,~~  
~~wherein said antigen is not linked to said PapMV or VLP, or is fused or covalently attached to the C-terminus of a coat protein of said PapMV, or VLP, to said PapMV coat protein or genetically modified PapMV coat protein, at a location other than the N-terminus, such that said antigen is disposed on the outer surface of the PapMV or VLP, and~~  
wherein said immune response is a humoral and/or cellular response.

21. (previously presented) The method of claim 20, wherein said PapMV is a wild-type virus.

22. (previously presented) The method of claim 20, wherein said PapMV is a recombinant virus.

23. (previously presented) The method of claim 20, wherein said PapMV is a pseudovirus.

24. (previously presented) The method of claim 20, wherein said antigen is an immunogen.

25. (cancelled)

26. (cancelled)

27. (cancelled)
28. (previously presented) The method of claim 20, wherein said antigen and said PapMV or VLP are not linked.
29. (previously presented) The method of claim 20, wherein said antigen and said adjuvant are administered parenterally, enterally or orally to said animal.
30. (previously presented) The method of claim 20, wherein said immune response is systemic.
31. (withdrawn) The method of claim 20, wherein said immune response is a mucosal immune response.
32. (previously presented) The method of claim 20, wherein said immune response is a humoral immune response.
33. (previously presented) The method of claim 20, wherein said immune response is a cellular immune response.
34. (previously presented) The method of claim 20, wherein said antigen is a viral, a bacterial or a parasitical protein, or fraction thereof.
35. (previously presented) The method of claim 20, wherein said antigen and said adjuvant are co-administered to said animal.
36. (previously presented) The method of claim 20, wherein said adjuvant is administered to said animal prior to administration of said antigen.
37. (previously presented) The method of claim 20, wherein said adjuvant is administered to said animal subsequent to administration of said antigen.

38. (previously presented) The method of claim 20, wherein said animal is a mammal, bird or fish.

39. (previously presented) The method of claim 38, wherein said animal is a mammal.

40. (withdrawn) The method of claim 38, wherein said animal is a bird.

41. (withdrawn) The method of claim 38, wherein said animal is a fish.

42. (previously presented) The method of claim 20, wherein said animal is a human.

43. (cancelled)

44. (cancelled)

45. (previously presented) The method of claim 20, wherein said antigen and said adjuvant are administered parenterally to said animal.

46. (previously presented) The method of claim 20, wherein said one or more B-cell antigenic epitopes and/or one or more T-cell antigenic epitopes are hepatitis C virus antigenic epitopes or *Salmonella typhi* antigenic epitopes.

47. (previously presented) The method of claim 20, wherein said cellular response is a cytotoxic T lymphocyte response.

48. (currently amended) A method of potentiating a humoral and/or cellular immune response against an antigen comprising one or more B-cell antigenic epitopes and/or one or more T-cell antigenic epitopes in an animal, said method comprising the step of administering to said animal said antigen and an effective amount of an adjuvant, wherein said adjuvant is a virus-like particle (VLP) comprising genetically modified PapMV coat protein, said genetically modified PapMV coat protein being capable of assembling to form said VLP,

wherein said genetically modified coat protein comprises one or more amino acid deletions, insertions and/or substitutions, and

wherein said antigen is fused to the C-terminus of said genetically modified PapMV coat protein.

49. (previously presented) The method of claim 48, wherein said antigen and said adjuvant are administered parenterally to said animal.

50. (previously presented) The method of claim 48, wherein said animal is a mammal.

51. (previously presented) The method of claim 48, wherein said animal is a human.

52. (previously presented) The method of claim 48, wherein said antigen is a viral, a bacterial or a parasitical protein, or fraction thereof.

53. (previously presented) The method of claim 48, wherein one or more B-cell antigenic epitopes and/or one or more T-cell antigenic epitopes are hepatitis C virus antigenic epitopes or *Salmonella typhi* antigenic epitopes.

54. (previously presented) The method of claim 48, wherein said cellular immune response is a cytotoxic T lymphocyte response.

55. (previously presented) The method of claim 20, wherein said adjuvant is PapMV.

56. (currently amended) The method of claim 20, wherein said adjuvant is a VLP comprising PapMV coat protein or genetically modified PapMV coat protein and said antigen is fused at or adjacent to the C-terminus of said PapMV coat protein or genetically modified PapMV coat protein.

57. (twice amended) The method of claim 20, wherein said PapMV coat protein or genetically modified PapMV coat protein is a recombinant protein produced in *E. coli*.

58. (previously presented) The method of claim 48, wherein said PapMV coat protein is a recombinant protein produced in *E. coli*.
59. (previously presented) The method of claim 20, wherein said adjuvant is a VLP comprising PapMV coat protein.
60. (previously presented) The method of claim 32, wherein said humoral immune response is a long lasting antibody memory response.
61. (previously presented) The method of claim 48, wherein said humoral immune response is a long lasting antibody memory response.